FIRE ENGINEERING
FIRE STATEMENT

6 AVONMOUTH STREET, ELEPHANT AND CASTLE, LONDON SE1 6NX

Ref – F10245

Version – 02
Status – Issue

Date: 27 10 2021

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SCOPE

This report is a Fire Statement. It aims to be presented as a Fire Statement form as required by the Gateway 1 for "relevant buildings" [requirements found in Article 7A or 9A of the Town and Country Planning (Development Management Procedure and Section 62A Applications) (England) (Amendment) Order 2021].

It can also be presented as a Fire Statement as required by the London Plan - Policy D12(B) for "major development proposals".

The fire safety matters within this are only relevant to the extent that they are relevant to land use planning. This statement does not go into the same detail you would expect in a submission to Building Control. This statement is aimed to support the consideration of information on fire safety issues relevant to land use planning specifically site layout and access.

Application information	
1. Site address line 1	6 Avonmouth Street
Site address line 2	Elephant and Castle
Town	London
County	London
Site postcode (optional)	SE1 6NX
2. Description of proposed development including any change of use (as stated on the application form):	Demolition of existing building and structures and erection of a part 2, part 7, part 14, part 16 storey plus basement mixed-use development comprising 1733sqm (GIA) of space for Class E employment use and/or community health hub and/or Class F1(a) education use and 233 purpose-built student residential rooms with associated amenity space and public realm works, car and cycle parking, and ancillary infrastructure. The development comprises a single new-build block. The block will have a total of 16 storeys (B2, B1, G+15). Part of the ground floor, the first basement level (B1) and the first floor (1F) will include a flexible space (for either employment use, community health club or education use) which will be served by two protected stair cores. The second basement level (B2), as well as the remainder of the ground floor, will comprise residential ancillary accommodation (plant, stores etc). With the exception of the first floor, all the above-ground floors will provide residential student accommodation, in the form of cluster flats and studio flats. The above-ground floors will be served by a single stair core, which will be designed as a firefighting stair. The seventh floor of the block (7F) will also include an external landscaped terrace.
3. Name of person completing the fire statement (as section 15.),	Adam Melrose – BSc (Hons) MRICS FCABE MIFireE MIFSM ICIOB Group Director – Clarke Banks (Fire Engineering) Limited

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relevant qualifications and experience.	Bachelor Degree (Honours) of Science in Building Surveying from Wolverhampton University – 1st Class - Bsc (Hons) - 2010 Full Member of the Institution of Fire Engineers – (MIFireE) - 2009 Full Member of the Institution of Fire Safety Managers – (MIFSM) - 2017 Incorporated Member of the Chartered Institue of Building – (ICIOB) - 2010 Fellow Member of the Association of Building Engineers (FCABE) - 2016 Chartered Member of The Royal Institution of Chartered Surveyors (MRICS) - 2010 My experience within the construction industry starts in 2004 as a trainee Building Control Consultant, spanning some 17 years. Through my experience I have dealt with the approval and construction of all sectors within the industry but in particular, considerable experience on high-rise residential buildings, low-rise residential buildings, medical care facilities, industrial buildings, retail developments, office sectors, public buildings, power station facilties and education offerings from nursery level up to higher education in the form of both public and private entities. Over the last 17 years I have been involved at all levels of project delivery including the consultation stages with multiple statutory bodies, such as local fire services, crown property services / The Crown Estate, the NHS, Ministry of Defence, Ministry of Justice and international parent companies that have their own standards and procedures.
4. State what, if any, consultation has been undertaken on issues relating to the fire safety of the development; and what account has been taken of this.	No consultation has been undertaken up to this point with any statutory body such as the local fire service or the building safety regulator / local authority.

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5. Site layout plan with block numbering as per building schedule referred to in 6.
(consistent with other plans drawings and information submitted in connection with the application)

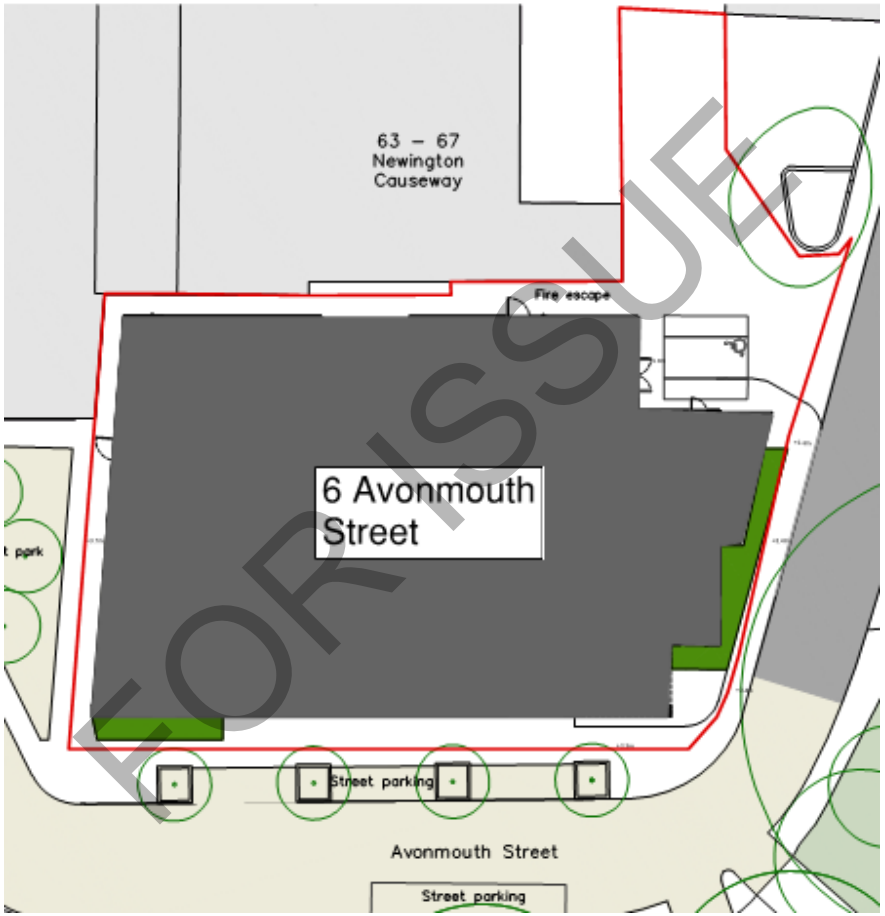

Figure 1: Site Location Plan

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The principles, concepts and approach relating to fire safety that have been applied to the development									
6. Building schedule									
Site information				Building information			Resident safety information		
a) block no. as per site layout plan above	b) block height (m) number of storeys excluding basements number of storeys including basements	c) proposed use (one per line)	d) location of use within block by floor level	e) standards relating to fire safety / approach applied	f) balconies	g) external wall systems	h) approach to evacuation	i) automatic suppression	j) accessible housing provided
6 Avonmouth Street	55.325 m (to roof parapet level); 18 storeys (B2, B1, G+15) 2 basement storeys (B2, B1)	flexible use (Employment space)	B1, G, 1F	BS9999	no balconies	Class A2-s1, d0 or better	simultaneous	yes- other (BS 9251:2021 coverage for residential areas; and BS EN 12845 for all other area areas not supported by BS 9251:2021	N/A non resi
		service area (Residential plant and storage spaces)	B2, G	BS9991			simultaneous		N/A non resi
		residential flats, maisonettes, studios	2F-15F	BS9991			stay put		M4(3) *5% M4(3)*

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The principles, concepts and approach relating to fire safety that have been applied to the development									
6. Building schedule									
Site information				Building information			Resident safety information		
		flexible use (External rooftop terace for residents)	7F	BS9991			simultaneous		N/A non resi

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7. Explain any specific technical complexities in terms of fire safety (for example green walls) and / or departures from information in building schedule above

- The building is classed as a relevant building as per Regulation 7. As such, the external wall construction as well as specified attachments (i.e. including balconies) will only include materials achieving A2-s1,d0 or better. Permitted exceptions will apply as stated in Regulation 7.
- The proposed development will be located in close proximity to all site or relevant boundaries. The proposed siting of the building will be supported by external wall fire-resisting construction as commensurate with the proximity to the boundaries, in order to ensure that the functional requirements in relation to Part B4, Schedule 1, of The Building Regulations 2010 are met. Any external wall areas located less than 1m from relevant boundaries will be fully fire-rated. External wall areas more than 1m away from the relevant boundaries will be evaluated using the methodology in Building Research Establishment report 187 (BRE 187);
- The development will include landscaped terraces on the seventh floor. The designs will ensure compliance with Fire Performance of Green Roofs and Walls (DCLG, 2013) as well as ensuring that minimum requirements under Part B4, Schedule 1, of the Building Regulations 2010 are also achieved. All balustrades and parapets shall be classed as forming part of the external wall construction, with both being subject to the requirements of Regulation 7.

8. Explain how any issues which might affect the fire safety of the development have been addressed

- The development is expected to include both studio flats and cluster flats;
- All cluster flats will be designed in line with the requirements listed in Section 9.8 of BS 9991. Studio flats are expected to be designed in line with Section 9.4.2a) of BS 9991;
- The common Means of Escape for the protected internal corridors serving residential areas will be provided in line with Figure 6b of BS 9991. Common corridor travel distances (i.e from the entrance door of a studio flat or cluster to the door into the stair) will be limited to 15m;
- The common corridors will be ventilated using a natural smoke shaft, which should meet the requirements listed in Clause 14.2.3.2 in BS 9991. Inlet air will be provided via an Automatic Opening Vent (AOV) sited at high level above the stair core;
- As part of the lift bank serving the residential floors, 1no. evacuation lift will be provided, in line with the London Plan Policy;
- In accordance with Table 4 of BS 9991, the minimum period of fire resistance for elements of structure is 120 minutes (REI 120) (based on a topmost storey height of more than 30m above lowest adjoining ground;
- The residential premises will be covered by a Category 4 automatic fire suppression system designed, installed, commissioned and maintained in line with BS 9251:2021;
- In line with BS 9251:2021, a limited number of ancillary areas (plant, stores etc) may be covered by the residential grade sprinkler systems, subject to the limitations presented in Tables 3 and 4 of BS 9251:2021. Any residential ancillary areas not feasibly covered by BS 9251 suppression will be covered by a BS EN 12845 system;
- All flats (clusters, studios), common corridors, will be designed as standalone compartments achieving a fire resistance of 60 minutes (EI60 where not load bearing);
- All compartment floors (including the ground floor slab and below-ground floors) will achieve a rating of 120 minutes (REI 120) ;
- The firefighting stair (residential stair core) and firefighting lift will be designed as 120-minute fire-resisting shafts (REI 120);
- The residential premises will be separated from the commercial premises by 120-minute fire-resisting compartment walls and floors (REI 120);
- All ductwork penetrations through fire-resisting lines will be provided with fire-dampers rated for the wall that they are located within;
- Dampers passing through protected escape routes, or through compartment walls or floors will be ES (fire and smoke classified) fire dampers.

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- The commercial areas will be served by two protected stair cores, designed as protected shafts achieving a minium fire resistance of 120 minutes REI 120);
- Disabled refuge points fitted with Emergency Voice Communication (EVC) equipment will be provided within both of the protected stair cores serving the commercial areas at both B1 and 1F. The ground floor is expected to be provided with step-free access;

9. Explain how any policies relating to fire safety in relevant local development documents have been taken into account.

LONDON PLAN POLICY D5(B5) – EVACUATION LIFTS

- As part of the lift bank serving the residential areas, one of the lifts will be an evacuation lift. The remaining lift will be a firefighting lift;
- One of the lifts forming part of the lift bank serving the commercial spaces on 1F and B1 should be an evacuation lift;
- Evacuation lifts will be designed based on the guidance presented in Annex G.2 of BS 9999, and guidance referenced therein; and
- Firefighting lifts will be designed based on the guidance presented in BS 9999, and guidance referenced therein.

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Emergency road vehicle access and water supplies for firefighting purposes
10. Explanation of fire service site plan(s) provided in 14. including what guidance documents have informed the proposed arrangements for fire service access and facilities? • The Fire Service access provisions are based on the requirements listed in BS 9991 and BS 9999; • Fire Service vehicle access will be provided via Avonmouth Street and Tiverton Street, which run north and east, and south of the proposed development, respectively. This will provide immediate access to the ground floor firefighting lobby serving the residential floors (both above- and below-ground); • The proposed route will also provide immediate access to the two protected stair cores serving the offices on the first floor and Basement level -1, as well as direct access to the ground level of the offices; • The residential premises will be provided with one residential type firefighting core (comprising a firefighting lift and evacuation lift, a firefighting stair including a dry rising main, connected by the protected residential lobbies); • The residential premises will also include an evacuation lift as detailed above sited adjacently to the firefighting lift. This is intended to avoid the need for occupants to use the firefighting lifts in the event of an emergency; • Special signage will be provided to the residential stair core to enable the Fire Service to conduct operations effectively. Wayfinding signage in accordance with the amended Approved Document B Volumes 1 & 2:2020 will be provided in support of firefighting operations; • All internal flat areas will be reachable within 60m from a dry main outlet located in the firefighting stair, on a route suitable for laying hose, given that the building has been provided with full sprinkler systems in accordance with BS 9251; • The dry rising main inlet point for the residential premises will be located on the face of the building, within 18m and a clear line of sight from the fire service appliance parking location; • The office areas will be provided with at least 15% accessible perimeter, expected to be provided via the south-west façade.
11. Emergency road vehicle access - can emergency road vehicles access the site entrances indicated on the site plan? • Yes. Due care will be given to ensure that the vehicle access route (consisting mainly of the public Avonmouth Street and Tiverton Street) achieves the requirements for a pump appliance as shown in Guidance Note 29 (London Fire Brigade). Any access / security measures in and around the site (especially any barriers or bollards preventing vehicle access) will need to be by-passable by the Fire Service. This will be confirmed by tracking exercises. Is the emergency vehicle tracking route to the siting points for appliances clear and unobstructed? • Yes – Access is carried out via existing public roads.
12. Siting of fire appliances

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- Fire Service vehicle access will be provided via Avonmouth Street and Tiverton Street, which are both public roads. These run north, east (Avonmouth Street) and south (Tiverton Street) of the proposed development. This arrangement is shown indicatively in Figure 2 of this report, however this will also be confirmed by tracking exercises;
- This will allow fire appliances to park within 18m from, and have a clear line of sight to, the dry riser main inlet point for the residential areas (shown indicatively as a red dot in Figure 2 of this report). Immediate access into the residential lobby expected to be provided next to the dry riser inlet point; and
- This will also allow fire appliances to park within 18m from entrance points located as part of the accessible perimeter serving the Basment level -1, Ground and the 1st Floor offices (shown as red arrows to the south of the development, in Figure 2 of this report).

13. Suitability of water supply for the scale of development proposed

- Public hydrants (existing) are expected to be provided within 100m of this building, as it is in a prominent central location. A request for information has been made to the London Fire Brigade Water Team via email on 10 09 2021;
- Based on street view imagery, an existing hydrant is currently located on the east of the proposed development, on the pavement running east of the site boundary. This hydrant is located approximately 15m away from the likely inlet point for the residential core. Similarly, it would be located approximately 30m away from the entrance points located on the accessible perimeter serving the offices;
- This hydrant should be confirmed as viable and achieving a flow rate of at least 1,500 litres/minute, in line with the requirements of BS 9990;
- If public, functional, hydrants are not confirmed to be present within 100m from the dry riser inlet point and accessible perimeter entrance, additional hydrants will be provided at a maximum distance of 90m from all aforementioned areas in order for the requirement to be met under BS 9991 and BS 9999. All new hydrants should comply with the requirements of BS 9990.

a) Nature of water supply:

- Hydrant – public

b) Does the proposed development rely on existing hydrants and if so are they currently usable / operable?

Don't know

- This is currently awaiting a response from the London Fire Brigade Water Team. If existing hydrants are not usable / operable, additional hydrants shall be provided in order to ensure that water supply requirements to the fire main inlets are provided as per BS 9991 (and as per BS 9999 for the office areas) and the details listed in Section 4 of the Fire Statement.

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14. Fire service site plan

Fire service site plan is: inserted in the form – see below.

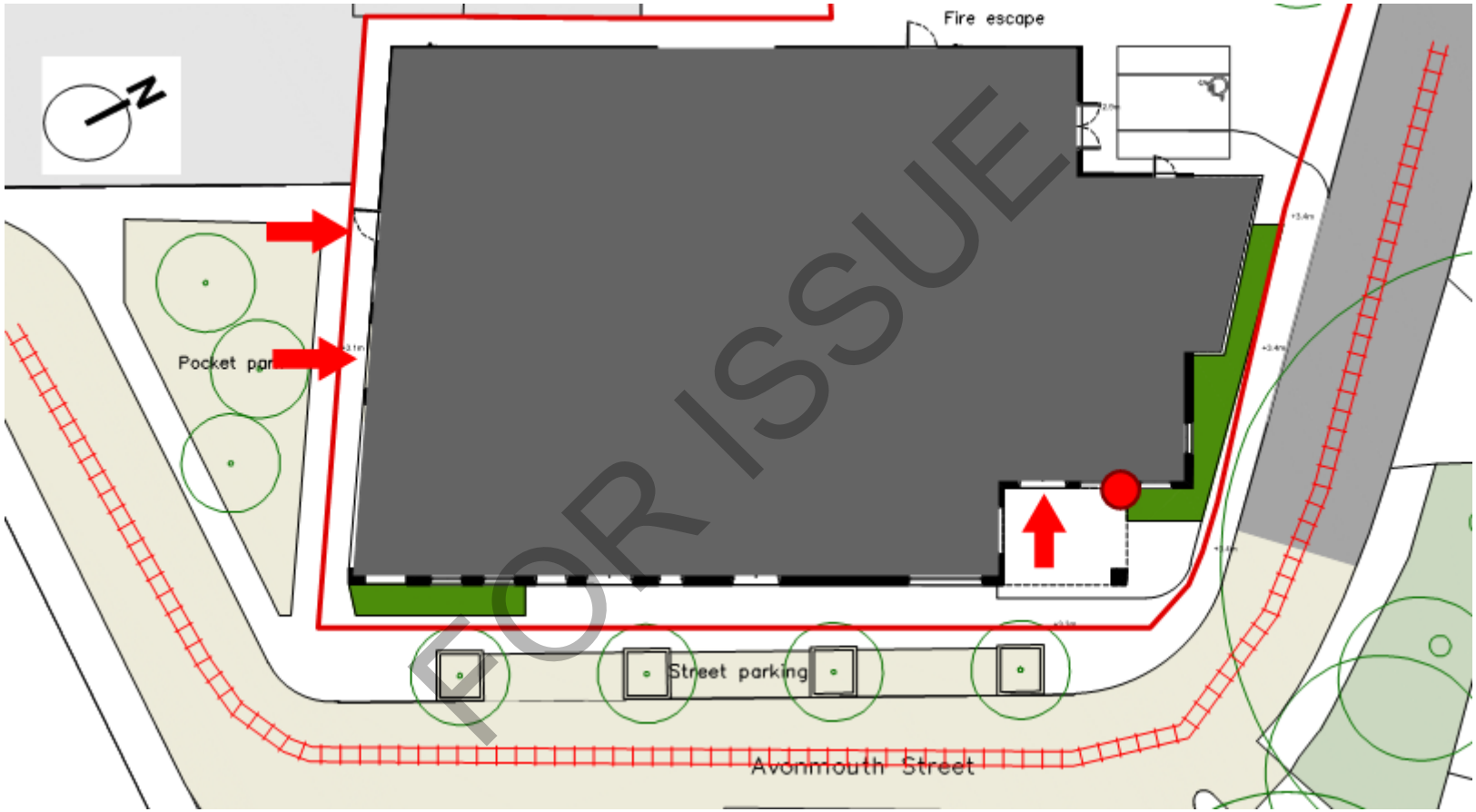

Figure 2: Indicative Fire Service Access Routes

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Fire statement completed by	
Signature	 Adam Melrose BSc (Hons) MRICS MIFireE FCABE ICIOB MIFSM
Date	27/10/2021

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